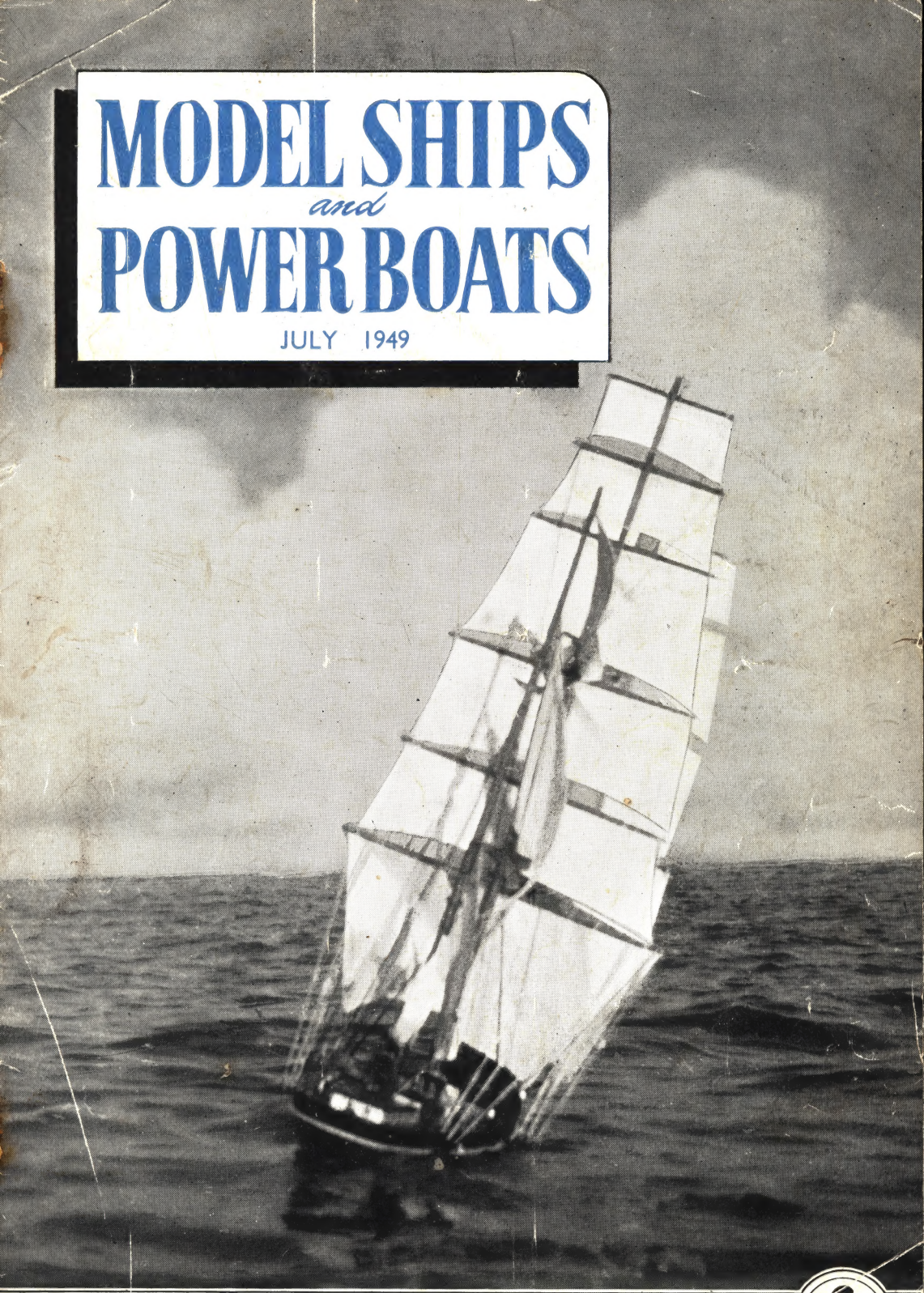
MODEL SHIPS *and* POWER BOATS

JULY 1949



A PERCIVAL MARSHALL PUBLICATION

6D

A NEW SERVICE FOR MODEL YACHTSMEN

There are many who would like to participate in this most popular Model Sport, but who are unable to make a Model Boat for the following reasons. Lack of materials, tools, skill or time. In endeavouring to overcome all these obstacles I have pleasure in offering you the advantages of my new service.

1. A Complete Kit of Materials for Hull.
2. Hull assembled but unfinished.
3. Hull completely finished but unpainted.
4. Hull completely finished and painted.
5. As 4 but including Deck Fittings.
6. A complete model with Mast and Sails.

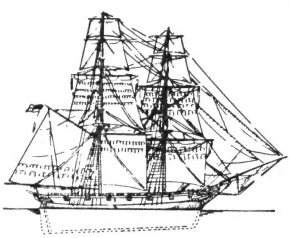
All the above can be supplied in the following classes, 36 in., " M " 6 metre, and 10-rater, either to your own plan or to our own standard design. Full particulars and prices upon request. All work is under the personal supervision of T. Lance, Esq., the well-known International Racing Model Yachtsman.

Best Quality Yacht Fittings in Brass

Turnbuckles. " A " and 10 R size, eyed both ends, **2/-** Ditto eye and hook, **2/3** each. " M " and 36 in. size as above, **1/6** and **1/9** each.
Shroud and Stay Plates, single eye **1/-**, double eye, **1/3** each.
Anti-Fouling Metal Sheave Blocks with deck plate, **2/6** each.
Spinnaker Hook Plates, **1/6** each.
Quadrant 10 R size, **10/6.**
Jib Rack, **4/-.** Main Horse, **4/-.** Jib Horse, **3/-.**
Travellers, double **3/-** : treble, **4/6.**
Best Ivorine Round Bowsers, ½ in., **3d.** each.

Please include postage with all orders.
Any yacht fitting made to order.
Export enquiries invited.

ARTHUR MULLETT
16, Meetinghouse Lane, Brighton, Sussex.



PLANS

All our sailing ship plans are from the board of :

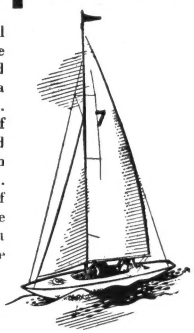
HAROLD A. UNDERHILL
author of *Sailing Ship Rigs and Rigging* and *Masting and Rigging the Clipper Ship and Ocean Carrier.*

Fully illustrated catalogues as under :
SAILING SHIP CATALOGUE, 9d.
POWER CRAFT CATALOGUE, 6d.
from
All Leading Model Dealers
or
Holborn Drawing & Tracing Co.
60-62 Queen Elizabeth Avenue,
HILLINGTON, GLASGOW, S.W.2

JOBS ONLY POSSIBLE WITH SYNWOOD No. 12

The Model was Soon Repaired

You cannot be proud of a model sailing boat if there's a great hole in the deck, or it has a splintered boom. In this case there was a hole below the water line as well. Tommy B. tacked a strip of canvas across the deck hole and covered it with SYNWOOD, which dried out hard without shrinking. Then he made a " tingle " of SYNWOOD below the under line and the result was a water-tight craft. All kinds of models can be repaired with SYNWOOD.



POROSAN regd.

SYNWOOD

NON-SHRINK
Moulding wood

Does the job in one operation: No building up layer upon layer needed. Once set IMPERVIOUS TO WATER Sold in JARS everywhere 1/6 and 2/6, or direct from the makers. postage 6d extra.

POROSAN LTD., 4/5 Warwick Court, London, W C.1
Scientific

MODEL YACHT PLANS

" MARBLEHEAD CLASS "	
" MERLIN "	**21s. 0d.**
" FALCON "	**6s. 3d.**
" OSPREY "	**13s. 6d.**
" 36-in. RESTRICTED CLASS "	
MODELCRAFT 36-in.	**5s. 9d.**
" MERLIN " 36-in.	**8s. 9d.**
" PENGUIN " 36-in.	**6s. 3d.**
" KESTREL " 24-in.	**5s. 6d.**
SAILING DINGHY 21-in.	**7s. 6d.**
SAILING SHARPIE 24-in.	**7s. 6d.**
" BERMUDIAN SLOOP " 24-in. ...	**7s. 6d.**

YACHT SAILS and FITTINGS, Brains Gear, Mast Tubes, Goose Necks, Gaffs, Bowsies, Sail Hooks and Eyes.
FULL 1949 CATALOGUE 9d. Post Free.
J. CHAPPELL — THE MODEL SHOP
393-5, Eccles New Road, Weaste, Salford, 5
Telephone : PEN 3079

WILSON, MACDUFF & CO. LTD.
5, VICTORIA STREET, LONDON, S.W.1

BLUEPRINTS **PROBLEMS**

Tea Clipper, " Stonehouse," on four 30 in. x 20 in. prints, to build a 38 in. working sailing model without the aid of a large false keel, **16s.**

Yacht. Four prints, three 30 in. x 20 in., and one smaller, full size sections for 22½ in. and 45 in. with a scale for a 10-rater, 70 in., **14s.**

Working Model Liner, " Stirling Castle." Three 30 in. x 20 in. prints, five scales, 29 in. to 77 in., the modern motor ship, deck by deck, **12s.**

Working Model Modern Cargo, " Westerdam " on three 30 in. x 20 in. prints, with four scales, **12s.**

Working Model Tribal Destroyer, " Cossack," on two 30 in. x 20 in. prints, four scales, 24 in. to 60 in. Multi Pom-Poms, Multi Machine-Guns, etc., **8s.**

Working Model Ocean Going Tug, on two prints, with full size sections for 50 in. or 55 in., **8s.**

Marine Centre Flue Boiler, one print covering from 6 in. to 12 in. with all details, **3s. 6d.**

Marine Blowlamp, burner and tank details, **3s.**

Model Ships and Power Boats

VOL 2 No 19 JULY 1949

PERCIVAL MARSHALL & CO LTD. 23 GREAT QUEEN ST. LONDON W.C.2

Contents

The Ship's Log	97	The Steam Yacht	108
Model Hydroplane Hulls (7) ...	98	Old Time Coastal Craft (1) ...	110
H.M.S. *Monarch* (1)	101	Editor's Correspondence ...	111
Sailing Model Square-Riggers ...	104	Trade Topics	111
Restoring Old Ship Models ...	106	News from the Clubs	112

The Ship's Log

British and American Power Boat Speeds

IN THE American magazine *Model Race Cars*, for March, 1949, a contributor, "Bob Graham," makes a comparison between the record speeds of British Power Boats and American. Undoubtedly, British speeds are, at present, much lower than those of our friends across the water, but we consider there is a very good reason for this. Up to 1939 the speed of British boats had been increasing year by year, until, in 1939, the record for "A" Class boats stood at 47.47 m.p.h. This was attained by Messrs. S. L. & S. B. Innocent, of the Victoria Club, at Farnborough. At that time, the American boats were much slower than ours. When the war came everything changed; materials were no longer available, clubs practically ceased to function, and more important still, the minds and hands of the designers and constructors were fully occupied in defending our lives and our futures. Even today, materials are still in very short supply, sailing waters are scarce, and most of us are still fully engaged in making up the leeway caused by the war years. All honour, then, to those enthusiasts who are re-establishing Britain's position in the model power boat world as in other spheres. We note that the engine in the illustration to the article is of the Aspin (British) type. Also that it is of 48 c.c., which is 60 per cent. more than our largest class.

Our Cover Picture

THE PHOTOGRAPH we have used for our cover picture this month was taken under difficult conditions. The photographer, Mr. R. Lough, who also built the model, was following his model in a rowing boat a mile or so out at sea off St. Abb's Head, Northumberland. Although the photograph is not of the first class technically, we consider that the model deserves our admiration. We can well believe Mr. Lough when he writes: "She makes a fine spectacle as seen from a small boat alongside." The hull of the model is only 40 in. long overall, and the displacement 18 lb., which is not a very big ship to undertake a trip of two miles in the sea. Many of us regret that, in the march of progress, the square rigged sailing ship has practically disappeared from the seas. The sailing model of a square rigger gives one an opportunity of seeing once again the beauty of sail, and even on a pond, the scale of the waves in a good breeze often approximates to that of the waves at sea under stormy conditions. The sailing model of a square rigger, or of any type of sailing craft, has a very different appeal from that of the racing yacht. In the latter, the interest is centred in speed, whereas, in the prototype model, the appeal is to the sailorising and to some extent to the artistic sense. At the Round Pond, Kensington, the writer recently saw a very fine model of a spritsail barge which showed all the beauty of these lovely, if somewhat work-a-day craft. There was also a nicely finished model of a Bermuda rigged ketch, and on contacting the owner, it appeared it was a replica of his own full-sized craft.

*MODEL HYDROPLANE HULLS

Their design and construction

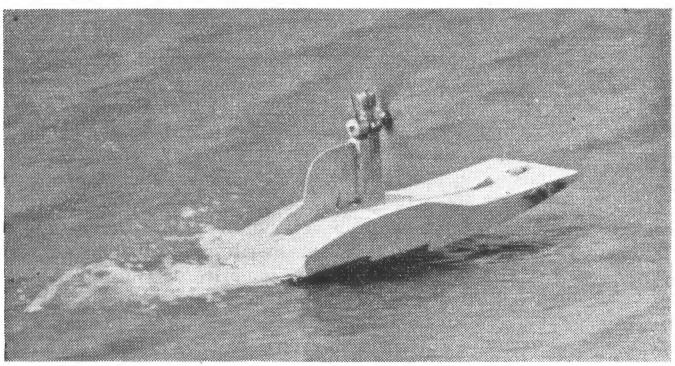
by *Edgar T. Westbury*

THE type of hydroplane designed to be driven by means of an airscrew, instead of the normal method of underwater screw propulsion, appears to be becoming popular in certain quarters, and I have been asked to give some hints on the design of hulls, for this form of drive. Contrary to the idea expressed by some of my readers, these boats (commonly termed "hydrogliders," and in France "glisseurs") are by no means a new development, and some very notable, or at any rate formidable examples of them appeared very early in the history of both model and full-sized hydroplanes. M. Santos-Dumont and Count Lambert were well-known exponents of the latter class in the early years of this century.

Fundamentally, there is no difference in the principles of hydroplane design, whatever the method of propulsion applied; but definite, and sometimes drastic, adjustments of angle, area and position of planing surfaces may have to be made to suit the altered conditions of propulsion. From the point of view of efficiency, little practical data is available, but there is probably little to choose between air and water propellers, and factors such as thrust and torque reaction in relation to r.p.m. would appear to follow similar rules. The airscrew possibly offers an escape from some of the problems of underwater propulsion, such as cavitation, engine stalling, drag of underwater gear, and risk of fouling with weeds; but it introduces others which are just as difficult of solution. Of these, perhaps the worst is the necessity for a very high propeller shaft line, involving a high thrust line; and also an undesirably high centre of gravity, unless indirect drive from engine to propeller is provided, which is likely to lower efficiency.

The effect of the high thrust line is to produce a very pronounced couple, tending to depress the bows of the boat when running; and though attempts are often made to reduce or neutralise this by adjusting the angle of the airscrew shaft, they are rarely a complete success. I have seen several hydro-gliders which either failed persistently to get their bows up sufficiently to assume planing attitude, or were very prone to nose-diving after achieving a precarious start. The effect is much the same whether tractor or pusher airscrews are used.

In the attempt to keep the shaft line as low as possible, experimenters have often used airscrews smaller in diameter than normal, but with larger pitch and blade area, to absorb the same amount of power as before. In a well-known commercial design of hull, the airscrew sweeps down into the cockpit, almost touching the floor of the hull, which must blank off quite a lot of its effective disc area; this hull, by the way, is provided with an aerofoil over the forward part, presumably with the idea of helping to keep the bows up.



Mr. Edwards' model hydroglider in action

*Continued from June issue, page 82.

A logical way of keeping down the shaft height is to use a twin-float or " catamaran " type of hull, with the engine between the floats, and this idea has been very extensively adopted in the past.

The high centre of gravity of the hydroglider makes it more than usually difficult to handle when running tethered on the circular course. I have never yet seen one of these boats going really fast under these conditions (or, to speak truly, any other !) but it would appear to require a high tethering line position to counteract centrifugal force acting through the c.g. at high speed. When getting under way, however, the high line position would be a definite disadvantage ; any snatch occurring before the boat has got fully under way would be liable to capsize it. The stopping of a really fast hydroglider would be a somewhat precarious operation, for while it is theoretically quite a simple matter to operate a switch lever projecting from the side of a moving boat, those who have tried it know that it is not as easy as it seems.

Readers may have formed the opinion that I am not favourably disposed towards the hydroglider, which is to some extent true ; but my opinions are not based on convention or prejudice—they are formed as a result of close observation and, I hope, sound reasoning. I strongly suspect that many enthusiasts who find this type of boat so attractive are either consciously or unconsciously taking the line of least resistance—it is *so* easy to take a model aircraft engine, complete with its propeller, and mount it on a hull, without all the bother of making couplings, shaft, stern bracket and propeller. While I have no possible objection to anyone doing so, if it gives them any pleasure either in the work involved or the subsequent running of the boat, I think that this is a pursuit for the dilettante, rather than the serious model engineer.

The photograph of a model hydroglider in action was submitted by Mr. J. S. Cristopher, of Ainsdale, Lancs., and the model was designed and built by Mr. Edwards, of Southport. It is 20 in. long by 6 in. beam, and constructed of thin balsa wood on a frame of the same material. The engine is a 1 c.c. E.D. " Bee " with a 6 in. diameter propeller.

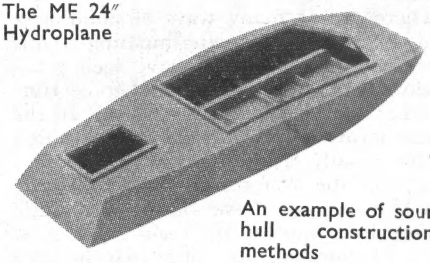
On the face of it, this photograph would appear to contradict my statement that hulls with this form of drive are liable to ride low at the bows, but it should be remembered that a single action photograph can only show a transitory phase in the movement of the boat, and there is no proof that it shows the mean position of the hull. As this boat is claimed to be quite fast, however, it is probable that it planes well, and in this respect the use of two steps, the forward one of which is shown quite clear of the water, may be helpful, as this step may serve as an anti-stalling device, normal running being done on the rear step.

It may be of interest to observe that as a result of questions arising as to the type of boats eligible to compete in M.P.B.A. racing events, the official definition of a " model power boat " has been determined as one coming within the specified restrictions of weight and engine capacity, and driven mechanically by an underwater propeller.

Jet-Propelled Boats

This is another subject on which advice has been asked, but I hope readers will not think I am setting my face against progress when I suggest that " the least said, soonest mended ! " apart from the small boats driven by solid-fuel cartridge charges, which, though capable of a thrilling burst of speed for a short run, are generally regarded as fascinating scientific toys, the high-power liquid-fuel jet motor is so difficult to handle, and is so noisy, that there are few places in this country where it could be used without annoyance, and possibly danger, to the public. In the hands of irresponsible operators, boats fitted with these motors might become a menace, not only to the people on the spot, but also to the entire model power boat movement, or even model engineering generally. Those who think that speed, obtained by fair means or foul, is the only thing that matters, are not true model enthusiasts ; the latter are attracted by the love of good craftsmanship, and the creative urge, to make things that work and give scope for individual talent. A much deeper and more

The ME 24" Hydroplane



An example of sound hull constructional methods

worthy satisfaction results from seeing one's own creations perform, however modestly, than from the most hair-raising performances produced by those who are much too clever to do things the hard way.

Notes on Hull Construction

This is another matter on which there are two distinct lines of approach ; one may go all out for quick results, irrespective of the finer points of design, craftsmanship and finish, or one may regard the construction of the hull as a worth-while end in itself, an interesting adventure in the constructional arts, to be carried out as well as one knows how. It may be argued—indeed it often is—that pains spent on the construction of a speed boat hull are largely wasted, as the hull not only gets badly battered, but may also have to be altered in detail many times in its career, so that however well one begins, its final form is liable to be like the wandering minstrel, " a thing of rags and patches." In the past many successful hulls have been knocked up by the quickest and crudest methods, typical of the packing-case maker rather than the conscientious shipwright. But on the other hand, the most consistently successful exponents of racing model craft have been noted for the conscientious care and skill they take in the construction of both hull and engine alike, and I strongly advocate that the beginner who wishes to take up model power boats seriously should follow their example.

There are as many ways of building a boat as there are of exterminating a *felis domesticus*, and I think I have seen practically all of them exploited at some time or other with more or less success. In the cruder forms of design, it has been common to use equally crude methods of construction, and the " crates," " kipper boxes " and " tea-trays " have often been little better than implied by their nicknames. Even in some of the hulls which have pretended to look a little more like boats, the methods of construction have been such as to make a good shipwright shudder. I have seen boats in which basic theories of construction have been completely ignored ; at one time, it was fairly common to build hulls with longitudinal stringers and inwales, but no cross members; and I have seen it urged in favour of this form of construction that one could alter planing angles by inserting stretchers of various lengths between the inwales at various points—much as one can bend the sole of a boot by stretching the uppers outwards !

The " dug-out " (carved from a single piece of wood) or " bread-and-butter " (layer-built) forms of construction are hardly ever used in model speed boat hulls, though common in the case of prototype boats. It is very difficult to carve such boats thin enough to produce the requisite lightness for the former purpose, and if they are cut down sufficiently in weight, their strength is liable to be inadequate for the hard usage to which they are subjected. I used a hull of this type some years ago, and it practically disintegrated in a single season under the combined effects of water bombardment and engine vibration; the material used in this case was white pine, which is much favoured for carved hulls because of the readiness with which it can be shaped with chisel and gouge.

In the course of building many hulls, I have come to the conclusion that it is very difficult to improve on the basic methods involved by many generations of shipwrights, who universally employ a system which may be compared to the anatomical structure of vertebrate creatures, comprising a " backbone " (usually the keel) and " ribs " to form a strong and resilient skeleton, on which is laid a planked or plated covering which further braces the structure but is not subjected to major stress.

Metal construction has not been used in model hydroplane hulls to any great extent, mainly due to the difficulty of building a sufficiently light hull of this type to compete with a wooden hull on the same basis. It is rather unfortunate that the metals most easily fabricated for this particular class of work are least suited, in respect of weight in relation to strength, for speed boat hulls. Nevertheless, there have been some very interesting experiments made in fabricating or panel-beating metal hulls, and I should hesitate to say that they are definitely precluded from becoming a serious rival to the wooden hull in the future.

(*To be continued*)

The illustration on page 102 shows H.M.S. " Monarch " at various stages of its career.

(a) *Ships rig.*

(b) *Barque rig.*

(c) *With military masts.*

H.M.S. *MONARCH*

The first ocean-going turret ship

by *J. H. Isherwood*

RIGGED ocean-going turret ship. Designed by the Admiralty and Mr. E. J. Reed. Cost, £371,415. Crew, 530.

A. 1869-1871. As orignally completed.

Hull. Iron. Displacement 8,350 tons.

Length, 343 ft. overall, 330 ft. b.p. Breadth, 57 ft. 6 in. Draft, F. 22 ft. 6 in. A. 26 ft. Depth, 18 ft. 8 in.

Three Decks. Forecastle. No poop. Hinged bulwarks amidships. Steam capstan. Balanced rudder. Steam steering gear and a 3-fold hand-wheel.

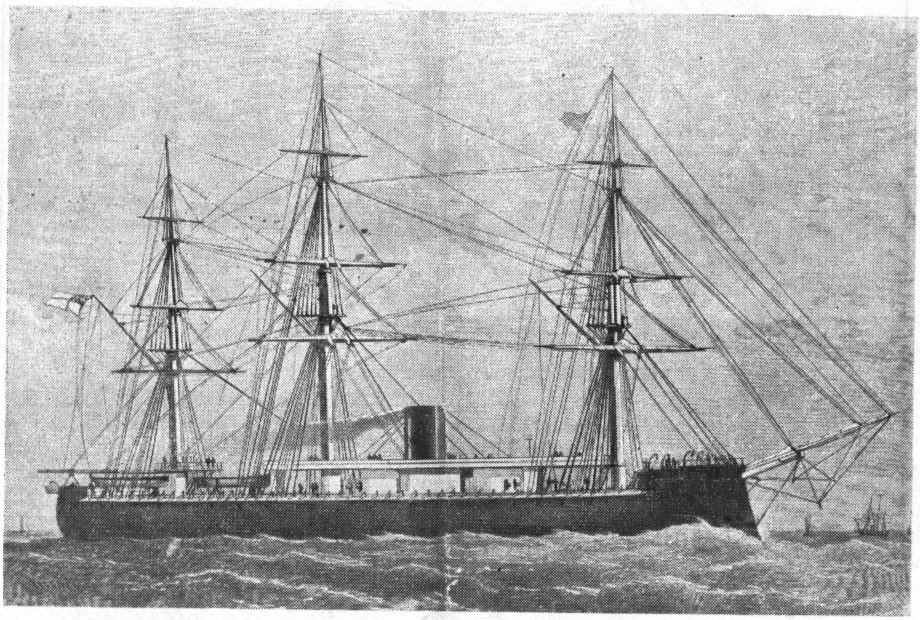
Speed : 14¼ knots. On trials, 14.9 knots, 7,842 i.h.p. at 63 r.p.m.

Propeller : 2 bladed, disconnecting, 23 ft. 6 in. dia. × 27 ft. pitch.

Armament. Four 12-in. M.L.R., 25 ton guns. Three 7-in. M.L.R., 6½ ton (2 under forecastle on upper deck, 1 at stem on main deck).

Armour. Iron. Complete belt and citadel.

Belt : 7 in., + 12 in. backing. Belt ends, 4½ in., + 12 in. backing.



A contemporary engraving of H.M.S. *Monarch* from the *Illustrated London News*

Sail. Ship rigged. Iron lowermasts, steel topmasts and lower and topsail yards. Was fairly handy and very fast. Best speed under sail about 13 knots.

Engines. By Humphrys and Tennant. Single screw. Horizontal return connecting-rod type. 2 cylinders 120 in. — 120 in. × 54 in. stroke, each cylinder having 2 piston rods.

Boilers : 9 rectangular tubular. 30 lbs. per sq. in. pressure. Oval telescopic funnel.

Citadel : 7 in. sides.

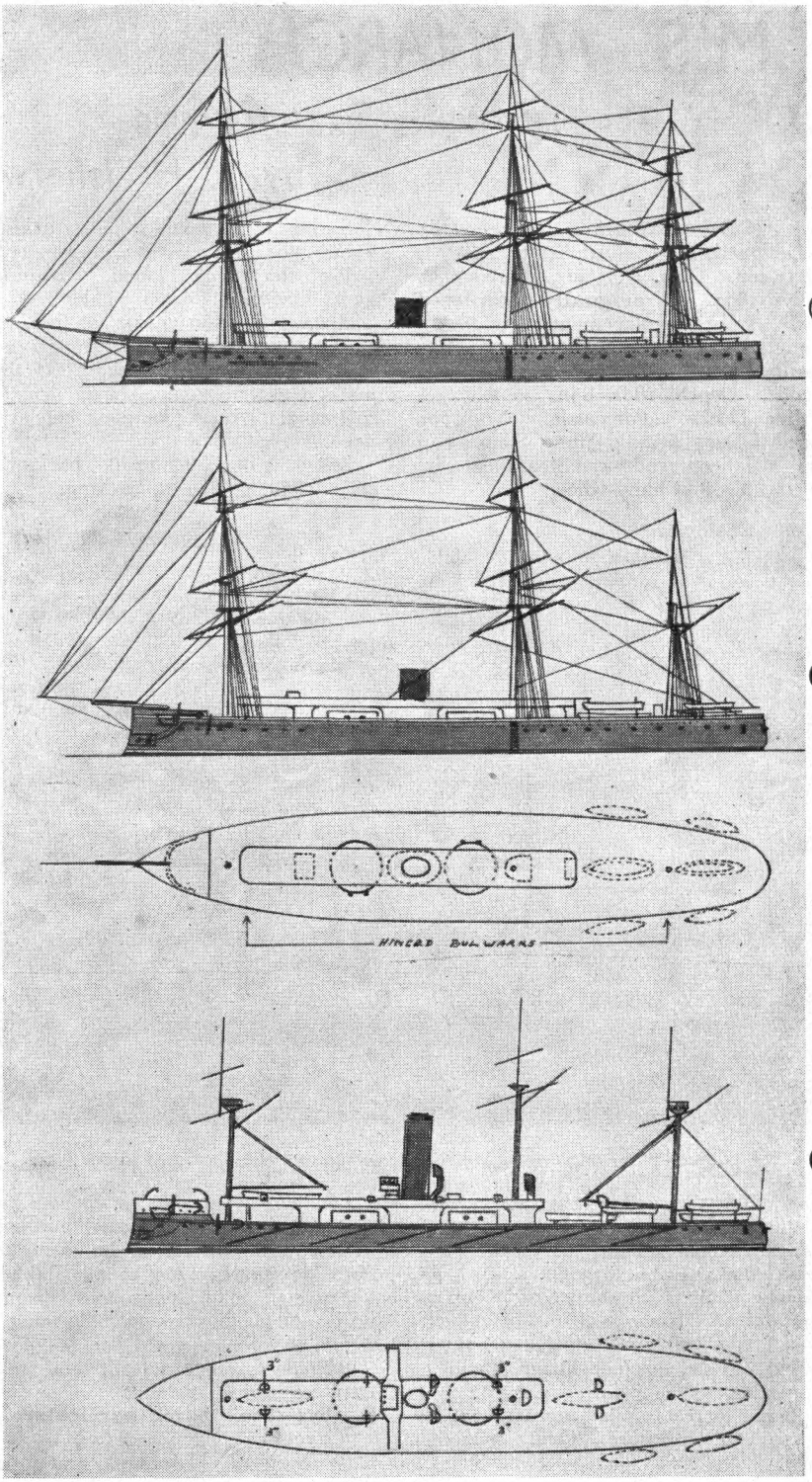
Bulkheads, 4½ in. forward and 4 in. aft to citadel. 5 in. screen bulkhead to bow guns. 12 in. backing to all bulkheads.

Turrets : 8 in., with 10 in. round gun ports, and 12 in. backing. Conning Tower 8 in.

Alterations. 1871. Refit and re-rigged resulting in :—

B. 1871-1890. Same particulars as A. except :

Barque-rigged. Topmasts, and topgallant


(a)
(b)
HINGED BULWARKS
(c)
D
D
D

masts, and all yards reduced. Steel spars replaced by wood.

Fixed iron bowsprit replaced by running-in bowsprit. She still sailed well.

Armament. Four 12-in. M.L.R. Two 9-in. M.L.R. under fo'c'sle. One 7-in. M.L.R. at stem on main deck. Broadside of 2,807 lbs.

Quantity of unnecessary ballast put into her after the loss of H.M.S. *Captain.*

1878. Fitted with two torpedo carriages on the main deck during refit.

1885. Fitted with torpedo net defence during refit.

1892-1897. Extensive refit and modernisation resulting in :—

C. 1892-1902.

Particulars as **B** except for :—

Military masts, and stripped of all sail.

New engines, by Maudslay. Inverted triple expansion, 8,216 i.h.p., 15.8 knots on trial, with forced draught.

New steel boilers, 150 lbs. per sq. in. pressure. New funnel. Radius about 4,000-5,000 miles.

Armament. Four 12-in. M.L.R. Two 9-in. M.L.R. One 7-in. M.L.R., 6½ ton. Four 3-in. Q.F., 12 pounders. Ten 3 pounders. Ten machine guns. Two torpedo tubes.

Crew. 570-590.

Hull Notes. Somewhat sluggish on first sailing trials, the fore part of the balanced rudder was reduced with good results. Freeboard 14 ft. Low bulwarks, hinged, and dropped when in action. Very steady gun platform. Handy and manoeuvrable under steam. Good seaboat. Comfortable. Fine entry, with ram ; stern like that of *Bellerophon.* Forecastle divided athwart ships by armoured bulkhead, curved into the bow lines, with the " heads " forward of it and the bow chase guns abaft it, firing through embrasures. Light narrow superstructure, or " flying " deck, from rear foremast to the quarter deck ; hammock nettings along its sides. Steam wheel in conning tower, 3-fold hand-wheel on the quarter deck, and another below it.

Boats. One launch, stowed on the quarter-deck, and hoisted by mainyard purchase. Steam pinnace stowed in the launch. Sailing pinnace stowed aft between mizzen-mast and taffrail. Four other boats of whaler or gig type were carried aft, under davits. These davits could be folded down along the ship's side when cleared for action. A further transom-sterned boat is shown in davits right over the stern in one old print of the ship, but this seems doubtful.

Anchor Notes. Two bower and two sheet anchors, all 6-ton iron, stocked, with the usual iron cat davits for working them. One 50-cwt. stem anchor. One 35-cwt. stream anchor. Two kedges. The main capstan was halfway between the foremast and the fore turret.

Sail Notes. First Class scale of spars.

" A " rig : 1869-71. Ship rigged. Iron lowermasts, deck to cap measured, 79 ft., 81 ft., and 63 ft. Steel topmasts were 65 ft. Lower yards, steel, 105 ft. Fore and main tops were 26 ft. across. Topmast crosstrees 18 ft. across. Fixed iron bowsprit. In this rig she once logged 13 knots under sail, a speed among battleships under sail only exceeded by the *Royal Oak.*

" B " rig : 1872-92. Barque. Lower masts as before. Steel spars replaced by wooden ones. Topmasts cut down 5 ft. Topgallant masts 49 ft. Lower yards 96 ft., toprail yards 68 ft. Wooden running-in bowsprit. In this rig she still sailed well.

Owing to the position of the second turret the mainmast had to be much farther aft than usual. To maintain sail balance the foremast was stepped well forward, resulting in the space between the two masts being quite abnormal.

The shrouds were greatly reduced in number to avoid obstructing the fire of the turret guns.

Gunnery Notes. On the main deck, there was only one gun, the 7 in. M.L.R. gun aft, where it had three available ports.

She was the first ocean-going ship to mount her big guns in turrets and all on the centreline.

These guns were from 16 ft. to 17 ft. above the waterline. The turrets had a diam. of 16 ft. and rose 7 ft. above the upper deck, with their bases on the main deck. The gunports were oval to allow of elevation. These were the first 12-in. guns in the R.N. to be mounted on the centreline of a capital ship, and the first to be rifled. (*Hotspur* was not completed until later.) They weighed 25 tons and were 15 ft. 2 in. long. The guns were mounted on built-up plate carriages which travelled on girder slides on the turret floor. They were elevated and depressed by means of three steps and screw jacks. Loaded inside the turret, the guns were run right back, either by winches or by the recoil.

The turrets were turned by steam, but all other operations, loading, laying, elevating etc. were by hand. The maximum rate of fire was about one double round in 2 minutes.

(*To be continued*)

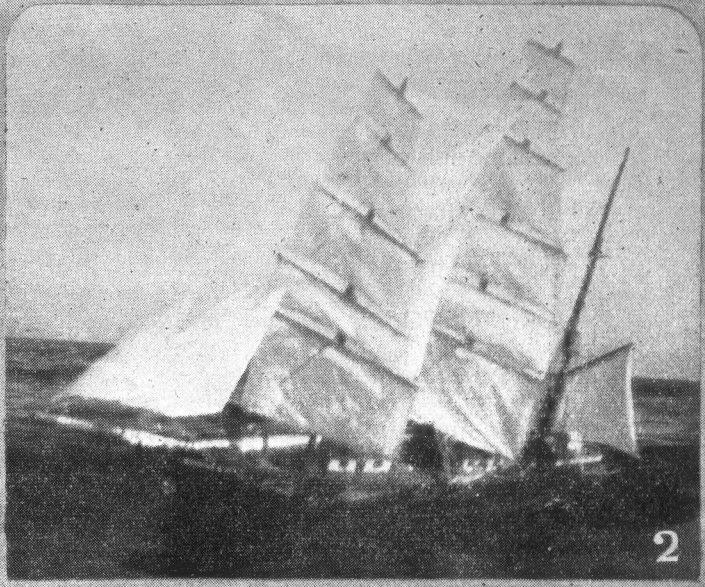
Model
-Riggers

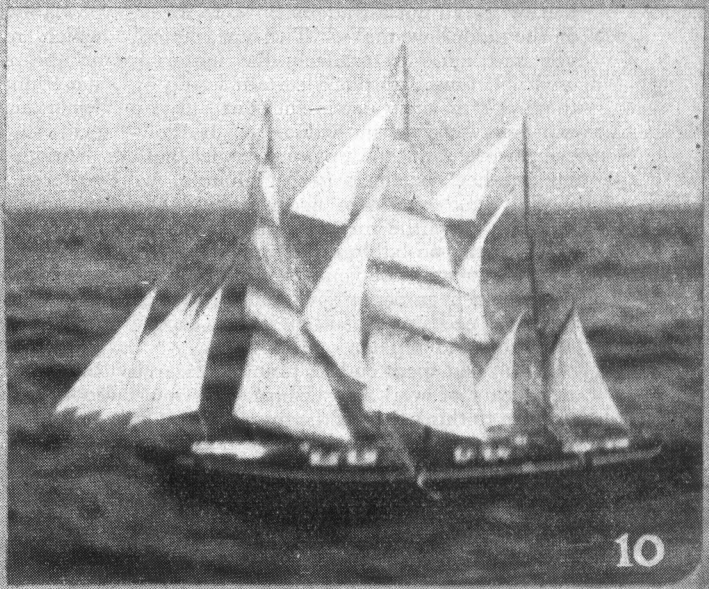
OWNESS

del seen at the Round

s model barque sailing
outh, Berwickshire.

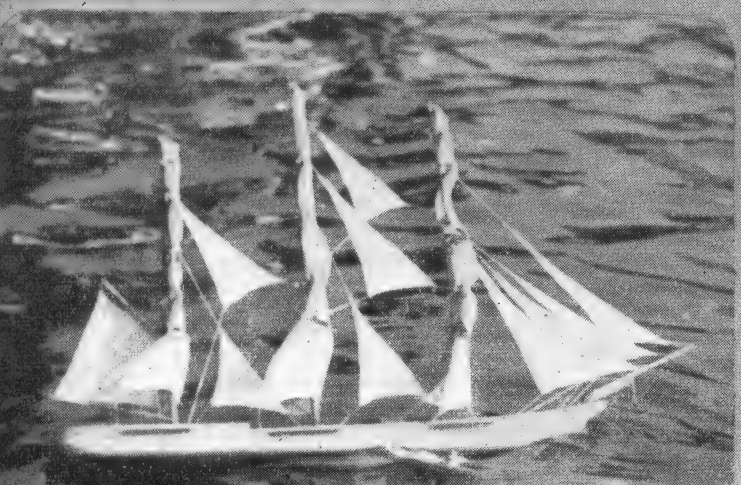
topsail schooner seen

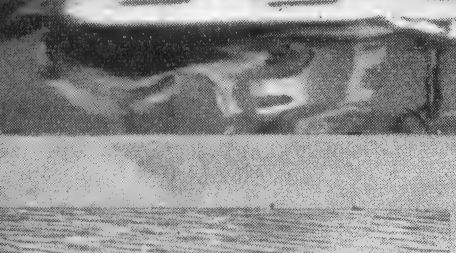


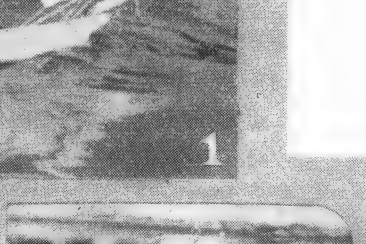


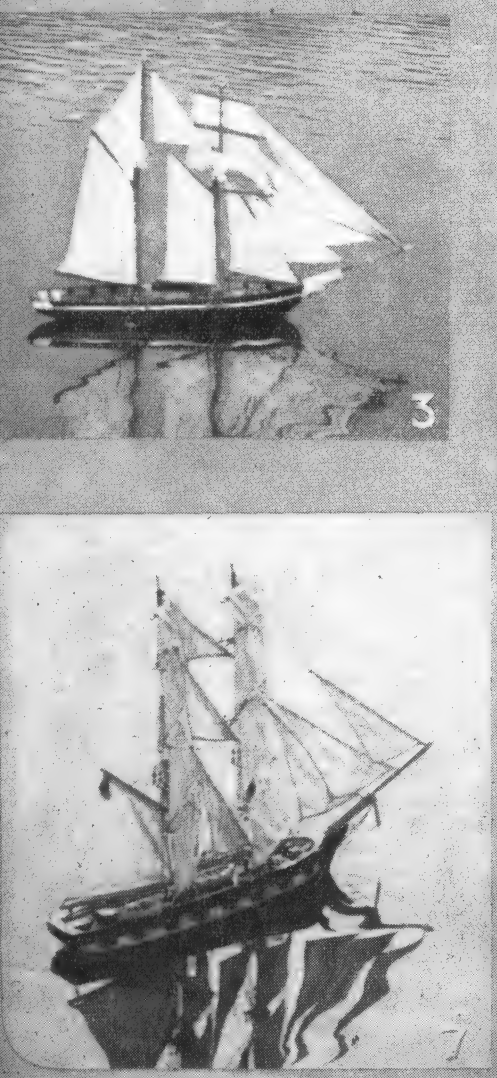
Sailing
Square-

BY E. B









1. A full rigged ship m
Pond, Kensington.

2, 9, & 10. Mr. Lough
in the sea off Eyem

3. A well proportioned
at the Round Pond.

4. A model barque mad
and sailed by M
D. I. Pratt, of Edmor
ton, N.9.

5. A lovely model of a
old time brig o
Highgate Pond.

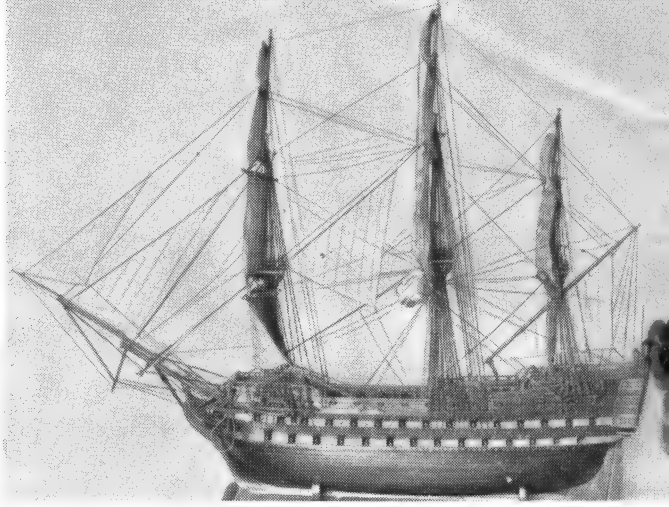
6. Viscount St. David'
three-masted schoone
on the Round Pond.

7. A very successfu
model brig *circa* 184
on the Round Pond.

8. An old-time bri
circa 1790, seen
the Round Pond.

(*Continued on page* 107

This model of H.M.S. Victory restored by NORMAN POOLE who gives some useful hints in this article on



RESTORING OLD SHIP MODELS

NUMEROUS books and articles have been written on the building of ship models, but few on their restoration. Therefore, these brief notes may give some guidance to anyone contemplating this task, which requires a very different approach. You will work under greater difficulty and face different problems. For instance, unless all the rigging has to be scrapped you will have to loosen cordage to fit replacements, thread blocks in almost impossible positions, and fit new spars to old halliards, lifts, etc. You are also liable to cause further damage. If the model is a valuable one you have added responsibility in this way, so be sure before you start that you have the ability, time, ingenuity and patience to complete it.

Now we all put a trademark, so to speak, on the models we make. The type, period, size and more particularly the materials used and finish, all put a certain stamp on them. This is no detriment, but only an expression of our individuality. If, however, we intend to repair a model built by another, particularly if valuable, we should sink our own individuality and slavishly copy the methods, materials and finish of the probably unknown craftsman. It is his model, not yours, which for some reason, such as neglect, vandalism or war damage, needs, and still deserves, careful attention and repair.

If you had spent endless time on research and years of work on a ship, you would not like to think that in the future, someone would come along and impose his ideas, alter this, "improve" that and change something else. Therefore, particularly if it is a contemporary model, leave things as they are, even if you do think they are wrong.

There are few people living who can be dogmatic about the details of a period ship model to a few years. The more one studies the ship and its history the more queries arise. The infinite details and arrangements evolved through the years and the individual variations introduced by builders and commanders make any dogma suspect. The museums and private collections contain models which have been finished or re-rigged by people with insufficient knowledge. Valuable old hulls have had rigging of a later century superimposed. This not only misleads but probably destroys some original details which may not have been appreciated at the time. It is far better to leave something undone, than to do it wrongly. Ignorance is not a sin, but tampering with evidence is.

Another desirable aim is that no new material, wood, metal or cordage should be visible; no patches of varnish or paint. The more conscientiously you have worked, the less your work will be seen, except by the expert. In fact, you will wonder yourself why you have taken so long over the job. You may point, with pride, to some particularly difficult detail, but few will give you credit, as it should look as aged and tarnished as similar untouched parts.

Concerning dust, you may use a vacuum cleaner and brushes of all sorts, yet be

unable to remove that " patina " that years of dust will leave on a deck for instance, even inside a case. Don't sandpaper, scrape or varnish it. Carbon tetrachloride will clean it a little, after loose dust is removed, and tobacco ash rubbed on new parts will help to simulate this.

Match not only the wood, but the grain and particularly the colour, if the wood was originally varnished. Brass cleaned with acetic acid and exposed to ammonia fumes will age. For small or awkwardly shaped bits, boxwood is a great standby, as cane is for dowels.

Before starting work, examine the model very carefully from every angle, note what is broken, what must be repaired and what replaced. Check every rope, label loose ends, blocks, etc. Save any broken ends of spars and odd bits and pieces, and don't remove anything until you are sure you know how to replace it. You may know at the time, but six months later you could spend hours on what should take minutes. The length of a stay is valuable evidence of its position, a frayed end on a pin will match with a halliard and check the belaying point. If possible, only scrap a part as a new one is fitted. Tangled ropes, stays, etc. will repay unravelling and may show something of real interest and save much time. A clean mark on the deck or rail may give a clue to the position of a doubtful part or lead.

Lastly, when you are doing fine work, even if your sight is perfect, use the best light, and plenty of it, but shade your eyes. Don't hesitate to use a glass; other things being equal you will do better work. A large diameter one of about 8-in. to 10-in. focus and on a stand is ideal, as you can then use both eyes and both hands. Work with your forearms at rest at a convenient height and have the tools you may need within reach, with clips and pegs of all sizes.

These hints are the result of hard won experience and I hope they will enable you to avoid at least some of the pitfalls.

The model in the illustration is considered to be of the first *Victory* of 1737 which was lost with all hands in 1744. It was built at about the beginning of this century, is planked, and is about 4 ft. long over all. It had a broken fore topgallant mast, bowsprit, jibboom and several yards. There were also some guns missing, torn rigging, some holes in the hull, and the whole was dirty and pitted with glass fragments as the result of bomb damage. Luckily everything could be " placed " and it is now as it was before being damaged. No attempt was made to correct doubtful details or to improve it in any way.

SAILING MODEL SQUARE-RIGGERS

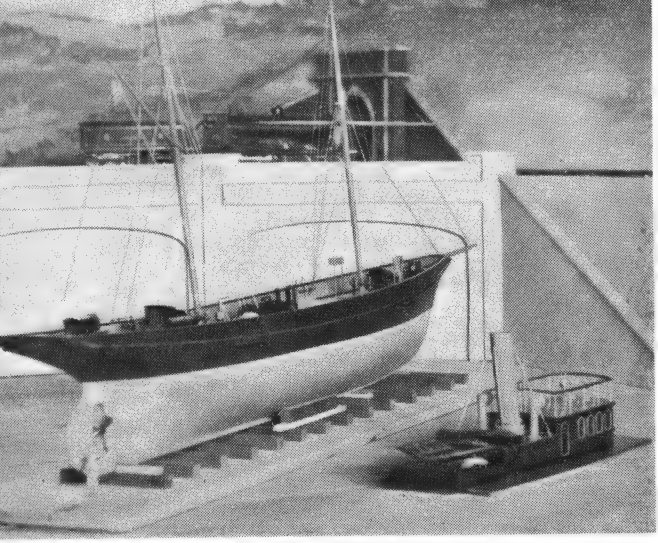
(See centre pages)

SINCE the article on this subject in our issue of last February, we have had a lot of correspondence on the subject and are gratified with the amount of interest which is being taken in this very fascinating type of working model. At the Round Pond, Kensington Gardens, there is a group of enthusiasts who sail prototype and square rigged models on most Sunday mornings. Photographs of some of their models are reproduced in our centre pages. There are two distinct schools of thought in this sphere of ship modelling—one which aims at the greatest possible realism both in hull fittings and rigging details, and the other which treats the model as a small ship and fits only such gear and rigging as will enable the vessel to sail successfully. Much can be said for both views, and in this matter, one should follow one's natural bent. Obviously, the more realistic the model, the better it is, although if better sailing can be ensured by simplifying the braces and adding some form of control to prevent the ship getting into irons when sailing in fluky winds, there would seem to be every justification for doing so. A working model doesn't look like its prototype if it refuses to keep going on a reasonable course.

The model illustrated in No. 4 on our centre page has a hull 42 in. long with a 13 in. flying jibboom. Her displacement is 14 lb. and she carries a lead keel of 7 lb. in the form of a drop keel. I fancy a drop keel is necessary on a model of 15 lb. or less displacement. For a larger model it should not be required, although for the sake of greater stability it is advisable to increase the beam and depth over scale dimensions. A model of 40 lb. displacement or more, if it represents the normal deep keeled type, should sail satisfactorily if built to correct scale proportions.

Nos. 2, 9 and 10 and also our Cover Picture show a very interesting model. In his letters, Mr. Lough informs me she is 40 in. long figurehead to taffrail, 8 in. beam and 19 lb. total weight. Her draught is $5\frac{1}{2}$ in. forward and 7 in. aft. A lead keel of about 8 lb. $1\frac{1}{2}$ in. deep tapering to $\frac{3}{4}$ in. deep forward is carried on a wooden fin or keel $2\frac{1}{2}$ in. deep. She was rigged

(*Continued on page 109*)

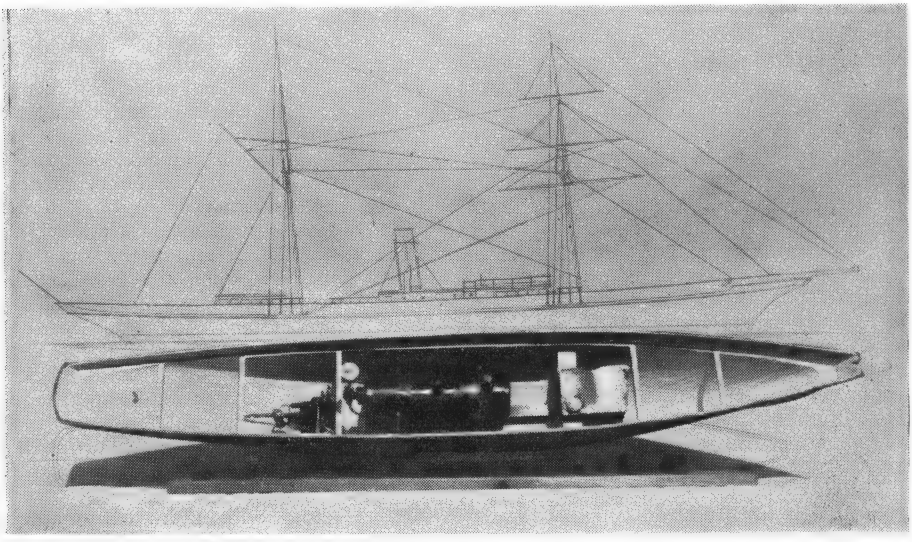


THE STEAM YACHT

as a prototype for the ship modeller

WE received recently from one of our friends in America, Mr. William Atkin, of Darien, Connecticut, some photographs and a drawing of a steam yacht he has built. To quote from his letter: "If there is anything more lovely than a steam yacht in the days of steam I should like to see it." This drawing is a yacht of the eighteen nineties, with modifications in rig and deck arrangement necessary for adaptation for a working steam model. I have tried to capture the spirit of old times and the charm of these noble yachts in this design. How ugly are the motor yachts of today compared with the simplicity and exquisite designs of yesterday's." We are inclined to agree with him. Admittedly, the modern motor yacht has a beauty of a kind, but it is the beauty of functional design and is strictly limited by functional considerations. Every foot of length has, so to speak, to earn its keep.

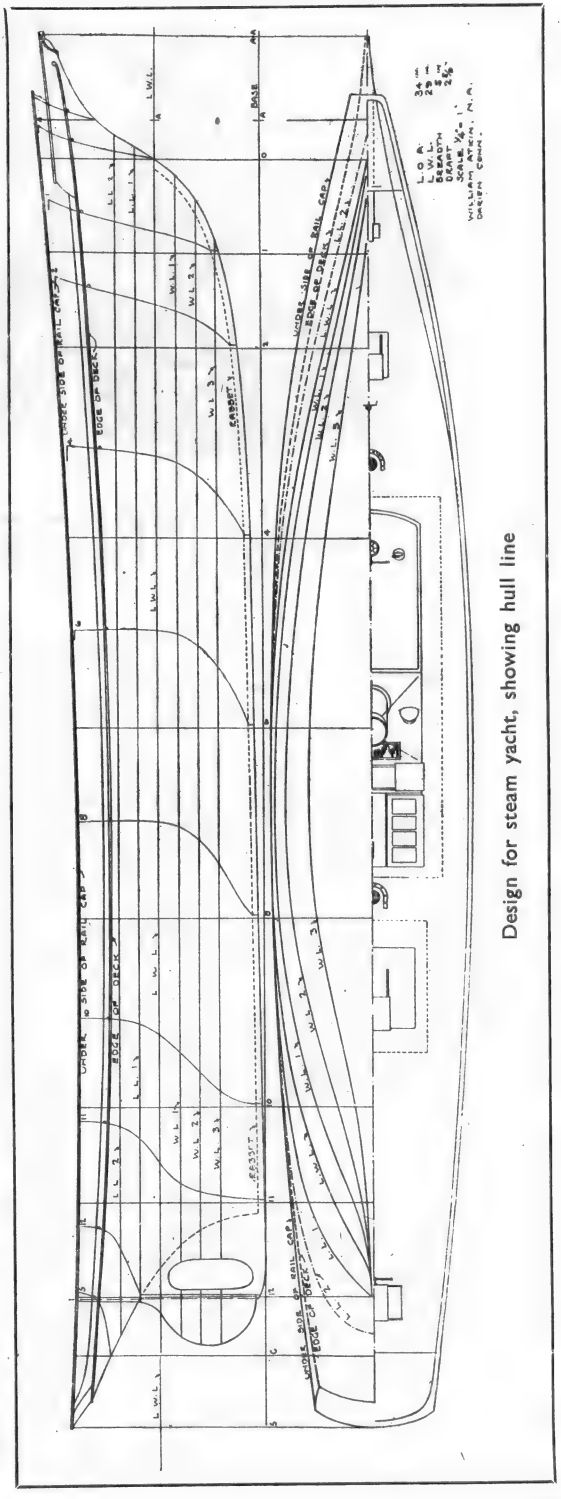
This is, of course, due to the times in which we live. In the days of the steam yacht, the aristocracy and the merchant



Hull of steam yacht showing power plant,
and at top of page, the yacht with superstructure removed

princes who built them were able to give the designer a free hand with the result that he produced the most luxurious and most handsome ship that he could imagine. Rivalry was keen both on the part of the owners, the designers and the builders, so it is not surprising that a standard was set which has never been surpassed. Luckily, the model maker is not affected by the changing times, at least, in so far as his modelmaking is concerned, as ship modelling is one of the most inexpensive of hobbies. Whether he models the most prosaic type of ship or the most luxurious has little or no effect on his purse. Therefore, if he wishes to make a really beautiful ship model with an interesting and smooth working power plant, the steam yacht offers immense possibilities.

Mr. Atkin's drawing shows a very handsome example of this type of vessel. Whether this amount of freeboard can be carried by such a slim underwater body depends on the scale and size of the model. Mr. Atkin's model, which is shown in the photographs, and is to $\frac{1}{4}$ in. scale, 34 in. long, overall by 5 in. beam, which gives approximately 9 lb. displacement for the draught shown. In our opinion, for serious pond work we think $\frac{3}{8}$ in. scale would be better, especially as models tend to appear much smaller than they really are when on the water. However, the model is a lovely example of its type, and the easy sweet lines show up well in the photographs.

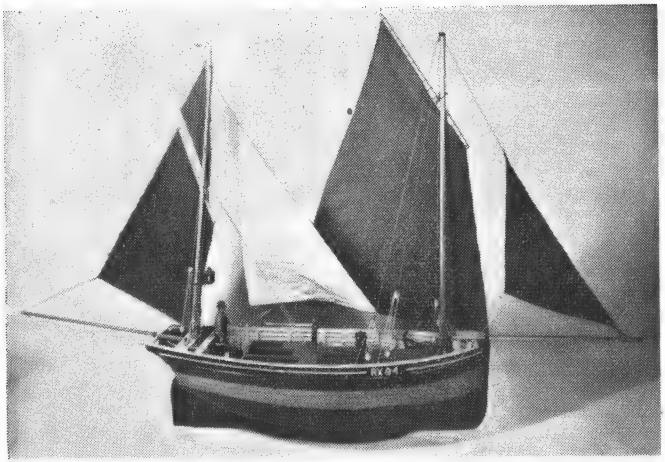


Design for steam yacht, showing hull line

MODEL SQUARE - RIGGERS

(*Continued from page 107*)

originally as a ship, but was reduced to the barque rig as she sails steadier with that rig. She likes a good breeze and sails fast and steady on her course. Mr. Lough says that, as there is no suitable pond in the district, he takes her out to sea and lets her away on a two mile run. The photographs were taken from a boat alongside as she was sailing in a stiff westerly breeze off St. Abb's Head.



L. H. FOSTER

writes the first of a series of articles on

OLD-TIME COASTAL CRAFT

THE HASTINGS LUGGER

HASTINGS has been an important fishing centre from time immemorial, but since the Middle Ages has lacked the advantage of a secure harbour.

Local conditions, therefore, demand a boat which can be hauled up the beach whenever it comes to land except in the finest weather, and the luggers exemplify the type evolved; broad, flat-bottomed, relatively light draught, stout bilge keels to keep the boat upright when aground, and the lute stern, or beaching counter.

The luggers are noteworthy as being the largest fishing boats to be habitually hauled up the beach, and are one of the few British fishing boats in which a centre-board is fitted.

Formerly they were three-masted. About the middle of last century the main lug was done away with, and the main mast was cut down to what remains today as the "Veer away post."

Originally, the boats were square sterned, but coast defence works in the early decades of the last century resulted in steepening the pitch of the beach, increasing the difficulty and danger of hauling out in bad weather. To meet these conditions the lute stern was built on to the flat transom, which had the effect of throwing a sea back from the boat and at the same time tending to lift the stern. An alternative form, the elliptical stern, was introduced later. In this, the after hoods of the planking instead of ending on the transom ran up in a steep curve to meet an elliptical deck plan. The lute stern, however, held its own.

Both masts are fitted in tabernacles.

Until the 1880's the luggers were fitted with leeboards. Thereafter a centre-board became standard practice until engines were introduced, and centre-board and rope room were done away with to make room for the engine and a power-driven capstan overhead.

Industry, the prototype of the model, and since said to have been broken up, was considered to be the best surviving example of her type.

Her principal dimensions were :—

Length overall ...	32 ft. 8 in.
Length on the keel	28 ft. 10 in.
Beam	12 ft. 0 in.
Depth of hold ...	4 ft. 9 in.
Built at Hastings ...	1870

The lines and many of the details for the model were taken from Mr. James Hornell's exhaustive articles on "The Fishing Luggers of Hastings," in the *Mariners' Mirror* for 1938, and "The Fishing Luggers of Brighton," in the *Sussex County Magazine* for 1942, amplified from local sources. The general arrangement has been modified to put her back as a purely sailing vessel, including the centre-board with its casing dividing the rope room.

The model, one of a series of disappearing types, was made by Mr. L. H. Foster of Kelvedon, Essex, to the scale of 1 : 16 ($\frac{3}{4}$ in. to 1 ft.).

EDITOR'S CORRESPONDENCE

DEAR SIR,—Whilst watching the regatta organised by the South Eastern Associations of Model Engineers, at Brockwell Park, on May 15th last, I was reminded of Mr. Westbury's recent article on "Boats that go Backwards."

The Association is composed of about sixteen clubs, and one of its aims is to promote the interests of power boat men. One would think that there could have been enough boats present to justify the time, energy and money used in staging what could have been a first class regatta.

In the A, B, C and E restricted classes there was a grand total of eight boats entered, four of these being powered by commercial engines. There were also present about twelve straight running boats. I heard several remarks such as "early in the season 'teething troubles'" etc., etc. "When does the pole racing season start, and how long do teething troubles take to rectify?"

I am not a boating enthusiast myself, but as one of the organisers, and a club secretary, I am keen on furthering the sport. I think that at least the lads might have turned up and "had a go."

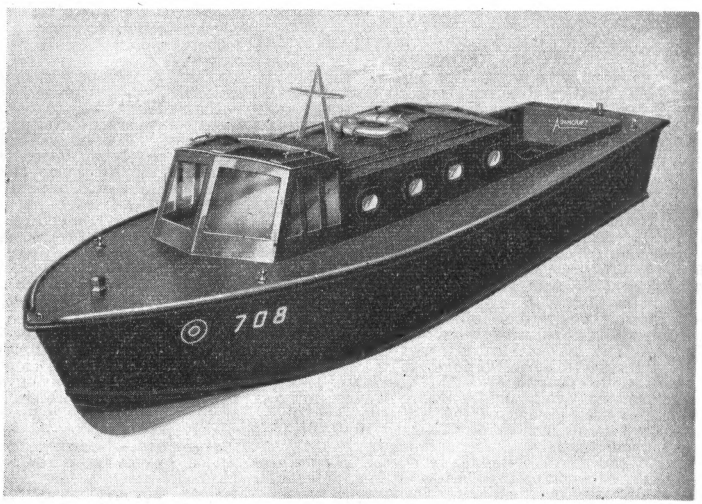
I suggest that Mr. Benson follows up his recent article on regattas, by publishing one entitled "How to Keep 'Em Running."

Yours faithfully,

73, Sangley Road,
Catford, S.E.6.

F. H. GRAY
Hon. Sec.,
Kent M.E. Society.

TRADE TOPICS



Adamcraft 30 in. Cabin Cruiser

Adamcraft (New Forest) Ltd., of Southampton, have put on the market a kit for a 30-in. R.A.F. Seaplane Tender. This type of model is probably the most popular of any at the present time. The hull is stable, easily driven, has ample freeboard and has a smart, modern appearance. The photograph reproduced on this page is taken from a model of this type made from the Adamcraft Kit, which, as will be seen, makes a very wholesome model of good appearance. The method of construction follows full size building practice. The instruction book, which accompanies the kit, describes the construction in great detail, and with the clear illustrations and scale drawings, will enable the veriest tyro to produce a good model. It is, in fact, a valuable treatise on the construction of this type of model. The materials supplied are very complete and well up to the high standard one expects from this firm. From a similar kit a fast Cabin Cruiser may be built. Both models have been designed for use either with the Adamcraft electric motor, the Mills diesel, or with any of the small i.c. engines available.

News from the Clubs

BIRMINGHAM MODEL YACHT CLUB

In the 36" Open Event for the Lawrence Bowl on May 28th, twelve boats from the Coventry, Bournville and home clubs sailed a very exciting race. At the beginning of the last heat only four points separated the first six competitors, and very keen racing finished off a grand day's sport, with the following results :—

1. A. Evans (Birmingham) *Porpoise* ... 36 points
2. W. H. Ray (Bournville) *Brota* ... ... 35 ,,
3. C. Leeds (Bournville) *Chance* ... ... 34 ,,
4. G. Smith (Birmingham) *Marjie* ... ... 33 ,,
5. A. Thornhill (Birmingham) *Enigma* ... 33 ,,
6. A. Davies (Bournville) *Argo* ... ... 30 ,,
7. J. B. Quilliam (Coventry) *Genesta* ... 29 ,,
8. J. Meir (Birmingham) *Denise* ... ... 29 ,,

MODEL YACHT SAILING ASSOCIATION

With several new 10 rate and marblehead and boats changing hands, racing this year promises to be very keen and likely to assume pre-war standards.

The following results are a summary of recent events held this year :

April 16th. *Dacia Cup* (*Inter-club*) 10 *rater*
1st Gardiner, Highgate M.Y.C. (13).
2nd H. Wake, M.Y.S.A. (12.)
3rd J. Anderton, M.Y.S.A. (9).
D. MacLean, London M.Y.C. (8), C. Seabrooke, London M.Y.C. (8).
May 7th. *Jubilee Cup*. 10 *rater*
1st H. Wake, 2nd J. Owles.
10 *rater club event*
April 9th, 1st W. C. Morrison, 2nd E. Porter, 3rd J. Richards.

VICTORIA REGATTA

The Annual Regatta was held on Sunday, May 22nd.

In the Nomination Race, only one run was allowed. Nominations were very good, the winner being Mr. Ettridge, with his famous paddle steamer *Royal Sovereign*. Mr. Hood (Swindon) made the best score, 3 points, with steering part of this event.

	Error
1. Mr. Ettridge (Victoria) *Royal Sovereign* ...	0.6 sec.
2. Mr. Curtis (Victoria) *Micky*	0.3 ,,
3. Mr. Kirkham (Swindon)	2.8 ,,

The two " C " class events one competitor succeeded in completing the course. The winner in this event was one of the Kingsmere Club miniature craft belonging to Mr. Walton (55.5 sec.) and was thus the only prize winner in this Class.

The steering Competition which followed proved a most interesting event, with the following results :

	Points
1. Mr. J. Benson (Blackheath) *Comet*	...11
2. Mr. W. Gates (Victoria) *Squib II*	... 8
3. Mr. Shepherd (Enfield and District) *ED1* ...	... 6

Only two boats completed the course in the " B " Class, Mr. Jutton's (Guildford) *Vesta* and Mr. Stallan's (King's Lynn) *Tha II*.

The day ended with a thrilling relay race. Teams of three boats, representing Blackheath, Victoria, Swindon, and two scratch teams took part. The eventual winner was the Victoria team, but the times were very close : Victoria (Vanner, Mitchell, Curtis) ...1 min. 44 sec. Blackheath (Benson, Rayman, Falkener) 1 min. 54 sec. Swindon (Hood, Kirkham, Walker) ...1 min. 57 sec.

S.E. ASSOCIATION REGATTA

A highly successful regatta, promoted by the S.E. Association of Model Engineers, and run under M.P.B.A. rules, was held at the boating lake, Brockwell Park, on Sunday, May 15th, in which numerous clubs were represented. The events catered for all classes of boats, the day commencing with a 500 yd. speed event for Class C (Restricted) hydroplanes. In this race, Mr. Phillips' (South London) new craft was an easy winner, completing at 43 m.p.h. powered by a 10 c.c. McCoy engine. Second place went to Mr. Hancock (Kingsmere) whose small boat finished at 21.5 m.p.h.

In the 500 yd. Class B race, Mr. Jutton's *Vesta II* gained 1st place at 35 m.p.h. Mr. Lines (Orpington) gained second place with his Sparky completing at 29.5 m.p.h.

The A class event proved that non-starting is still one of the worst obstacles of pole racing, none of the competitors succeeding in completing the course. The race was thus declared void.

During the lunch interval, an unfortunate incident occurred when Mr. Parris was trying out his boat Wasp. A nylon line, which was being used, stretched to such an extent that Mr. Parris was unable to get clear and was struck on the leg. Prompt first-aid revealed no serious injury but severe bruising.

The afternoon was left to the Steering boats and commenced with a nomination race. The full results are as follows :

	% *Error*
1st. Mr. A. Rayman (Blackheath) *Yvette* ...	Nil
2nd. Mr. B. Whiting (Orpington) *Ann*	4.5
3rd. Mr. Hood (Swindon) *Truant*	7.7

In the steering competition, Mr. Hood's *Truant* was the eventual winner, and a tie for second place between Messrs. Vanner and Benson had to be run off. The final results were as follows :

	points
1st. Mr. Hood (Swindon) *Truant*	8
2nd. Mr. Benson (Blackheath) *Comet*	7-2
3rd. Mr. Vanner (Victoria) *All Alone*	7-1

THE KENT S.M.E. REGATTA

Despite this event being held early in the year, quite a good turnout of boats was seen at the Kent S.M.E. Regatta, which was held at the Princess of Wales Pond, the home water of the Blackheath Club.

This was the first M.P.B.A. regatta of the season, and also the first full event to be held by the Kent Society. Supporting clubs included the Blackheath, Victoria, South London, Orpington, Malden and the new Kingsmere Club.

The first event was the 50 yd. Nomination Race in which good runs were made by most of he boats with the following results :

	% *Error*
1st. Mr. B. Whiting (Orpington) *Ann*	4
2nd. Mr. Curtis (Victoria) *Micky*	5

During the short lunch interval it was decided to make a nomination event for the pole racing boats as there were insufficient boats in each class to warrant holding a proper race. It was interesting to see the small hydroplanes of the Kingsmere Club in action, one of them winning the race with a speed of 30.25 m.p.h.

	% *Error*
1st. Mr. Bunton (Kingsmere)	6.8
2nd. Mr. G. Lines (Orpington) *Sparky*	7

The regatta concluded with a steering competition in which the results were as follows :

	points
1st. Mr. Curtis (Victoria) *Micky*	11
2nd. Mr. E. Vanner (Kent) *All Alone*	9

BOURNVILLE M.Y. & P.B. CLUB

On Saturday, May 7th, the Mr. and Mrs. Edward Cadbury Silver Yacht Trophy was competed for at Valley Park by members of the Clapham, Coventry and Bournville Clubs. Much skill was called for on the part of the skippers as the breeze changed repeatedly in strength and direction. Leading scores were close, but the eventual winner was D. Knight's *Regina*. Close behind, by only two points, was M. Fairbrother's *Shulah*.

Leading Scores :

	points
1st. D. Knight (Clapham) *Regina*	31
2nd. M. Fairbrother (Bournville) *Shulah*	29
3rd. A. Davis (Bournville) *Cormorant*	18

The trophy was presented by Mr. W. H. Davey, Chairman of the 1949 National and International " A " Class Regatta Committee.

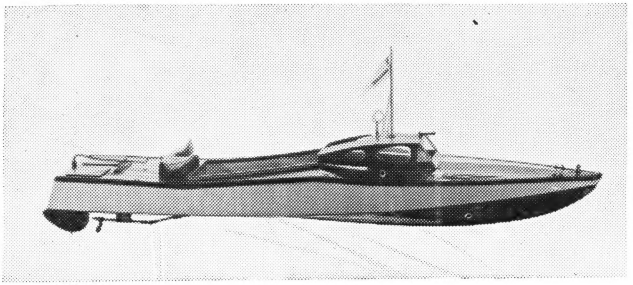
Bournville versus City of Birmingham

The City Club won a well deserved victory in the two rounds annual contest for the Ratcliffe Trophy. The first round sailed on the lake in Valley Park on May 14th, resulted in a two points advantage to Birmingham. On the next Saturday at Witton this advantage was increased to 14 points, evidence of the superior handling of 36-in. craft by the home crews.

Final scores were : Birmingham, 15 pts for 10 raters and 64 pts for 36 in., with a total of 79, and for Bournville 25 pts for 10 raters and 40 pts for 26 in., with a total of 65 pts. Special commendation goes to Messrs. A. Thornhill, W. Smith and E. Mills for Birmingham and J. Drury, P. Lee, and G. Leeds for Bournville.

Report of Birmingham S.M.S. Exhibition held over till next month.

PREMIER AEROMODEL SUPPLIES LTD.



P. M. 4. "GYPSY AVENGER" 35/-

34 in. high-speed cabin cruiser. Designed by Cecil Phillips and suitable for any 2 c.c. to 3·5 c.c. diesel or petrol engine. Kit contains decking cut to shape, finished propeller shaft and tube and universal joint. Ample supply of spruce and other materials, blueprint, etc.

TRADE enquiries to "HILL VIEW WORKS" East End Rd., N.2. Retail orders to: 37, Upper Street, N.1.

MONTHLY TERMS ARRANGED

7 oz. Crystal-clear lenses. Ideal holiday, sporting events, **40s. 6d.** W.D. model, full-size, in case and leather slings, **£3 10s.** Very special 6-lens achromatic model, **£5 19s. 6d.**, in case, etc. All post 1s. Also **Telescopes.**
EX-ARMY BELL TENTS £5 15s. 0d. Carriage Paid. Complete Circle, 44 ft., height 9 ft. 6 in.
RIDGE TENT £2 12s. 6d. Carriage etc., 1s. 6d. 5 ft. 6 in. along ridge, 7 ft. 3 in. along wall, 4 ft. 6 in. wide, 3 ft. 6 in. high, 12 in. high wall.

Marquees, Tarpaulins, Camping Equipment. Send for Bumper List.
HEADQUARTER & GENERAL SUPPLIES LTD. (MSPB) 196-200 Coldharbour Lane, Loughborough Junction, London, S.E.5.

AVAILABLE SHORTLY

A LIMITED EDITION OF

THE CUTTY SARK

by Dr. C. N. LONGRIDGE

In two parts—printed on heavy art paper, bound in blue cloth. Fully illustrated and complete with working drawings in each part.

Price complete 25/- net

This is probably the last opportunity of securing a collector's copy of this famous work. The blocks and type were destroyed during the war leaving sheet stock for only a very limited edition.

ORDER FROM YOUR USUAL BOOKSHOP OR

PERCIVAL MARSHALL & CO. LTD.

23 Great Queen Street, W.C.2

MODEL SHIPS AND POWER BOATS

SALES & WANTS

Private, 3*d. per word.* *Trade*, 6*d. per word.*
Use of Box No. 1s. *extra.*

CELLULOSE PAINTS. Stovings, Synthetics. Catalogue free. Spraying Handbook 3s. 6d., post free.—LEONARD BROOKS & Co., Harold Wood, Essex.

SHAMROCK III scale model, 6 ft. overall, 3 ft. hull, has won many race prizes. Good condition, £10. View London. Phone HAMpstead 5879.

MODEL YACHTS, choose from the finest selection in the country. Also model launches and speedboats; steam, I.C. and electric marine power units for model craft. A big variety of plans and kits for all kinds marine models as well as a wide range of model yacht, ship and galleon fittings. Balsa, obechi and mahogany, in fact everything for the ship modeller. Write for price list "E" post free, 4d.—CARDIFF MODEL SUPPLIES, 11, Celtic Corridor, Newport Road, Cardiff.

WANTED "M.S. & P.B." Nos. 1-4 in good condition.—T. WILLIAMS, 22, Penkett Road, Wallasey, Cheshire.

Notices

The Editor invites correspondence and original contributions on all subjects connected with model ships and power boats, which should be addressed to him at 23, Great Queen Street, London, W.C.2. Matter intended for publication should be clearly written, and should always bear the sender's name and address.

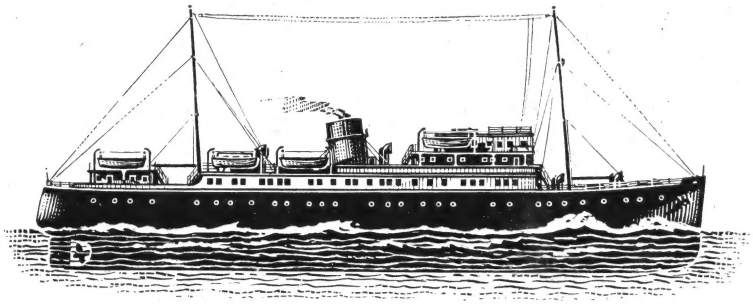
All correspondence relating to sales of the paper should be addressed to THE SALES MANAGER and correspondence relating to display advertisements to THE ADVERTISEMENT MANAGER.

"Model Ships and Power Boats" is published by PERCIVAL MARSHALL AND CO. LTD., at 23, Great Queen Street, London, W.C.2, on the first day of each month. Price 6d. Annual subscription, post free, 7s. 6d.

All rights in this issue are strictly reserved. No part of the contents may be reproduced in any form without the permission of the publishers.

Printed in Great Britain for the Proprietors by ELECTRICAL PRESS LTD., Cordwallis Works, Maidenhead, Berks, and published by PERCIVAL MARSHALL & CO. LTD., 23, Great Queen Street, London, W.C.2.

AQUILA CONSTRUCTIONAL KITS FOR MODEL SHIPS



This illustration shows the fourth model in our range, Kit No. C.204, price 57s. 6d., 39 in. length ARRAN CROSS-CHANNEL STEAMER. A conventional type of Steamer using the plank-built hull.

We have pleasure in announcing that we can now supply all sizes of cut obechi, the ideal wood for model boat construction.

Also available:

Sidelights, flanged, ¼ in., 3d.; ⅜ in., 4d.; ½ in. 4d.; ⅝ in., 5d., plus tax.

Propeller assemblies from 2/3 to 6/-, plus tax. Rudder assemblies from 9d. to 2/6, plus tax.

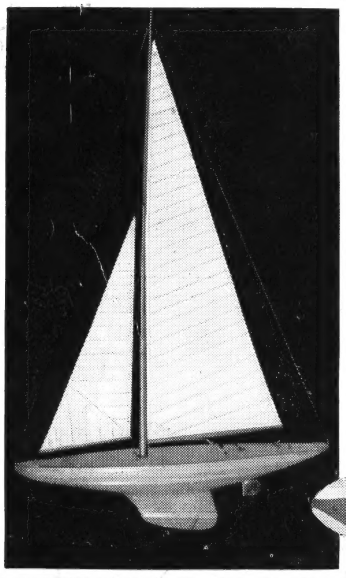
Full particulars of Constructional Kits of Launches, Cabin Cruisers, Steam Yachts, etc., can be obtained from your local dealer or direct from the manufacturers, enclosing 4d. in stamps.

The latest model to be added to this range, "The Dolphin," a 31 in. high-speed Cabin Cruiser, suitable for motors of from 2 c.c. to 5 c.c., price **42s. 6d.**

MODELLERS SUPPLY LIMITED

Makers of the famous Airyda Model Aircraft and Anorma Model Building Constructional Kits and Sundries.

AIRYDA WORKS, ASPLEY, HUDDERSFIELD. Telephone : 5511 (2 lines)

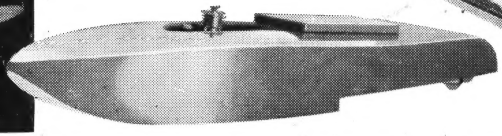


WORLD FAMOUS DROME KITS

"Fiona" 3' Yacht, complete with tapered masts, sails ready made. All Balsa construction. **£4/12/6.**

"Drome" special 2 ft. Hydro-plane — designed for speed. Water-driven. Beam 8 in. Suitable for diesel, electric and petrol engines. **£1/9/6.**

Write for fully illustrated Catalogue and guide—price 1/- post free.



MODEL AERODROME, 141, STRATFORD RD., BIRMINGHAM, 11